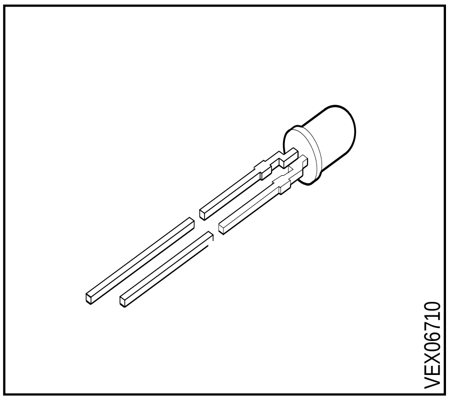
SIEMENS

Hyper 3 mm (T1) LED, Non Diffused Hyper-Bright LED

LS 3336, LA 3336, LO 3336 LY 3336



Besondere Merkmale

- nicht eingefärbtes, klares Gehäuse
- zur Einkopplung in Lichtleiter
- als optischer Indikator einsetzbar
- Lötspieße mit Aufsetzebene
- gegurtet lieferbar
- Störimpulsfest nach DIN 40839

Features

- colorless, clear package
- optical coupling into light pipes
- for use as optical indicator
- solder leads with stand-off
- available taped on reel
- load dump resistant acc. to DIN 40839

Typ **Type**	**Emissionsfarbe** **Color of Emission**	**Gehäusefarbe** **Color of Package**	**Lichtstärke** **Luminous Intensity** I_F **= 20 mA** I_V **(mcd)**	**Bestellnummer** **Ordering Code**
LS 3336-QT	super-red	colorless clear	63 ... 500	Q62703-Q3482
LS 3336-R			100 ... 200	Q62703-Q3484
LS 3336-S			160 ... 320	Q62703-Q3485
LS 3336-T			250 ... 500	Q62703-Q3813
LS 3336-RU			100 ... 800	Q62703-Q3486
LA 3336-RU	amber	colorless clear	100 ... 800	Q62703-Q3554
LA 3336-S			160 ... 320	Q62703-Q3551
LA 3336-T			250 ... 500	Q62703-Q3552
LA 3336-U			400 ... 800	Q62703-Q3553
LA 3336-SV			160 ... 1250	Q62703-Q3555
LO 3336-RU	orange	colorless clear	100 ... 800	Q62703-Q3144
LO 3336-S			160 ... 320	Q62703-Q3176
LO 3336-T			250 ... 500	Q62703-Q3170
LO 3336-U			400 ... 800	Q62703-Q3307
LO 3336-SV			160 ... 1250	Q62703-Q3177
LY 3336-RU	yellow	colorless clear	100 ... 800	Q62703-Q3487
LY 3336-S			160 ... 320	Q62703-Q3489
LY 3336-T			250 ... 500	Q62703-Q3490
LY 3336-U			400 ... 800	Q62703-Q3814
LY 3336-SV			160 ... 1250	Q62703-Q3491

Streuung der Lichtstärke in einer Verpackungseinheit $I_{V\,max} / I_{V\,min} \leq 2.0$.
Luminous intensity ratio in one packaging unit $I_{V\,max} / I_{V\,min} \leq 2.0$.

Grenzwerte
Maximum Ratings

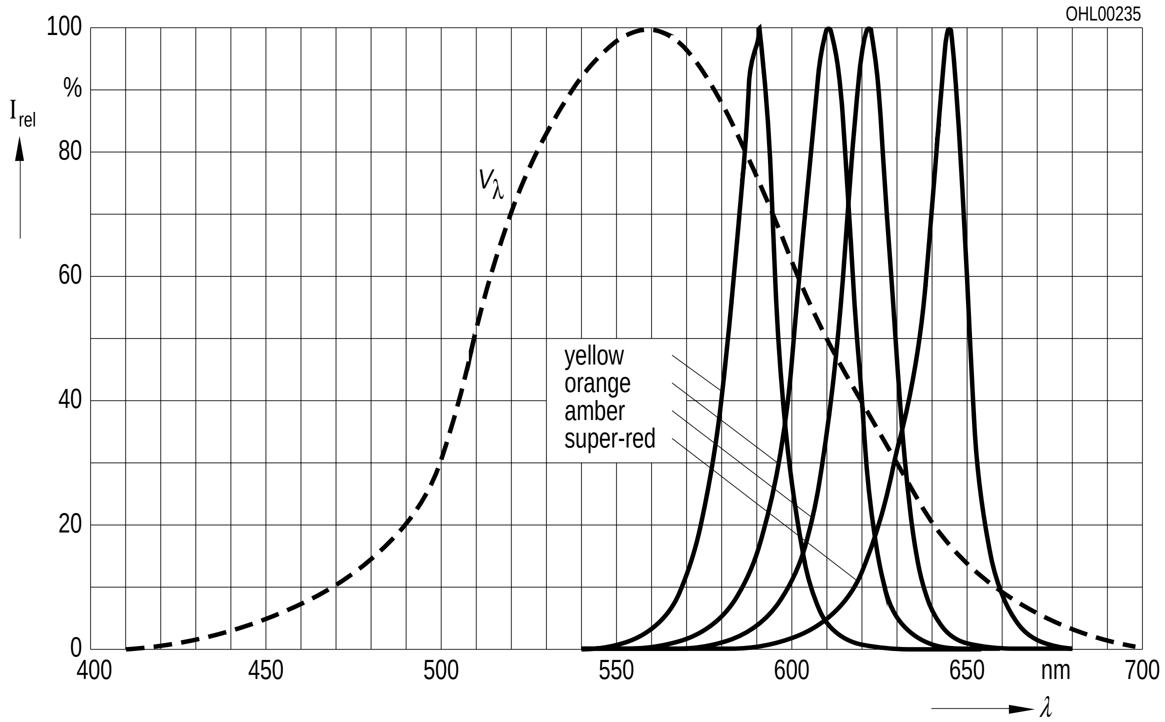
Bezeichnung **Parameter**	**Symbol** **Symbol**	**Werte** **Values**		**Einheit** **Unit**
		LS, LO, LA	**LY**	
Betriebstemperatur Operating temperature range	T_{op}	– 55 ... + 100		˚C
Lagertemperatur Storage temperature range	T_{stg}	– 55 ... + 100		˚C
Sperrschichttemperatur Junction temperature	T_j	+ 100		˚C
Durchlaßstrom Forward current	I_F	30	20	mA
Stoßstrom Surge current $t \leq 10$ µs, $D = 0.005$	I_{FM}	1	0.2	A
Sperrspanung[1)] Reverse voltage[1)]	V_R	3		V
Verlustleistung Power dissipation $T_A \leq 25$ ˚C	P_{tot}	80	55	mW
Wärmewiderstand Thermal resistance Sperrschicht / Umgebung Junction / air	$R_{th\ JA}$	500		K/W

1) Belastung in Sperrichtung sollte vermieden werden.
1) Reverse biasing should be avoided.

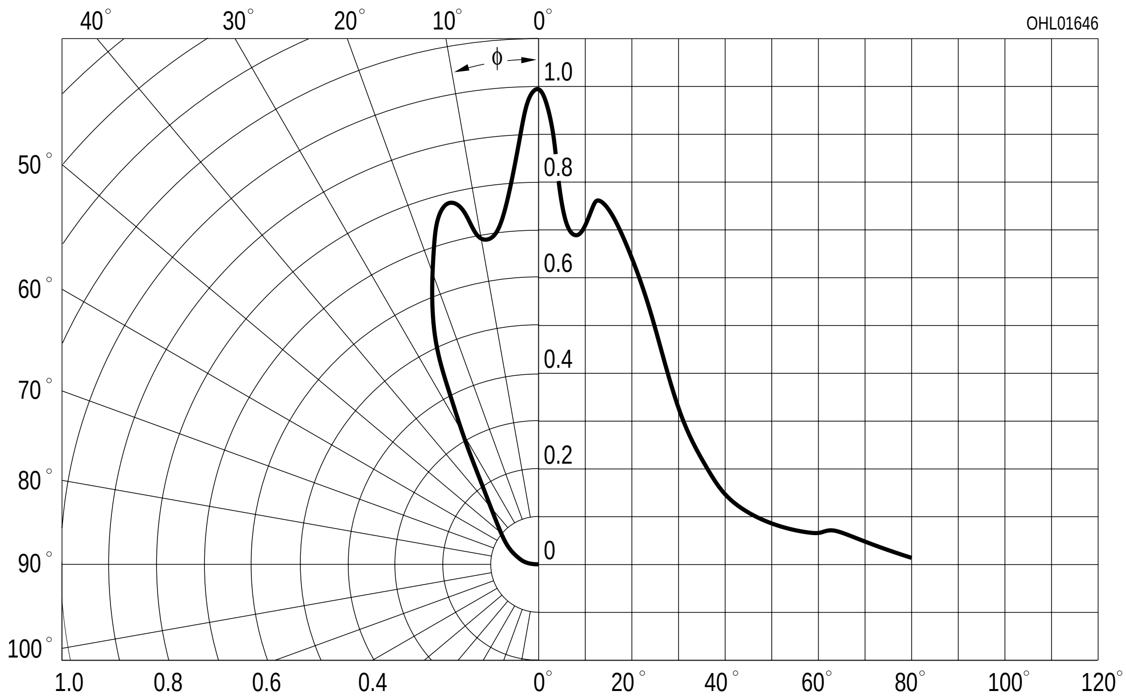
Kennwerte (T_A = 25 ˚C)
Characteristics

Bezeichnung Parameter	Symbol Symbol	Werte Values				Einheit Unit
		LS	LA	LO	LY	
Wellenlänge des emittierten Lichtes (typ.) Wavelength at peak emission (typ.) I_F = 20 mA	λ_{peak}	645	622	610	591	nm
Dominantwellenlänge (typ.) Dominant wavelength (typ.) I_F = 20 mA	λ_{dom}	632	615	605	587	nm
Spektrale Bandbreite bei 50% $I_{rel\ max}$ (typ.) Spectral bandwidth at 50% $I_{rel\ max}$ (typ.) I_F = 20 mA	$\Delta\lambda$	16	16	16	15	nm
Abstrahlwinkel bei 50% I_v (Vollwinkel) Viewing angle at 50% I_v	2φ	50	50	50	50	Grad deg.
Durchlaßspannung (typ.) Forward voltage (max.) I_F = 20 mA	V_F V_F	2.0 2.6	2.0 2.6	2.0 2.6	2.0 2.6	V V
Sperrstrom (typ.) Reverse current (max.) V_R = 3 V	I_R I_R	0.01 10	0.01 10	0.01 10	0.01 10	µA µA
Temperaturkoeffizient von λ_{dom} (I_F = 20 mA) Temperature coefficient of λ_{dom} (I_F = 20 mA)	TC_λ	0.014	0.062	0.067	0.096	nm/K
Temperaturkoeffizient von λ_{peak}, I_F = 20 mA (typ.) Temperature coefficient of λ_{peak}, I_F = 20 mA (typ.)	TC_λ	0.14	0.13	0.13	0.13	nm/K
Temperaturkoeffizient von V_F, I_F = 20 mA (typ.) Temperature coefficient of V_F, I_F = 20 mA (typ.)	TC_V	– 1.95	– 1.78	– 1.67	– 2.51	mV/K

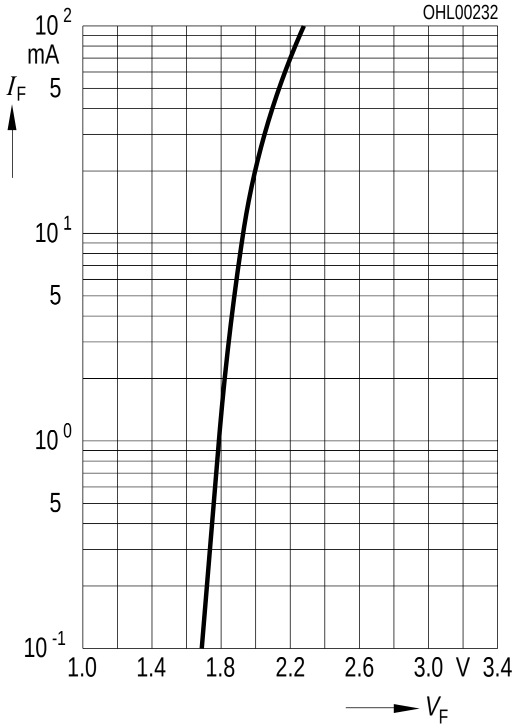
Relative spektrale Emission $I_{rel} = f(\lambda)$, T_A = 25 °C, I_F = 20 mA
Relative spectral emission
V (λ) = spektrale Augenempfindlichkeit
Standard eye response curve



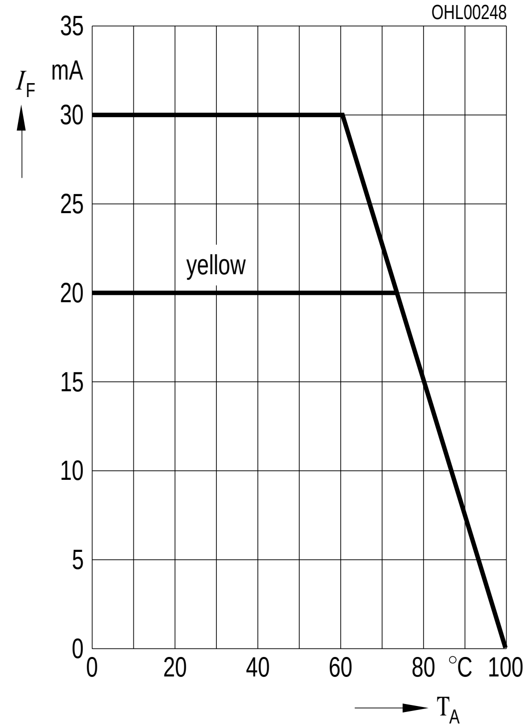
Abstrahlcharakteristik $I_{rel} = f(\varphi)$
Radiation characteristic



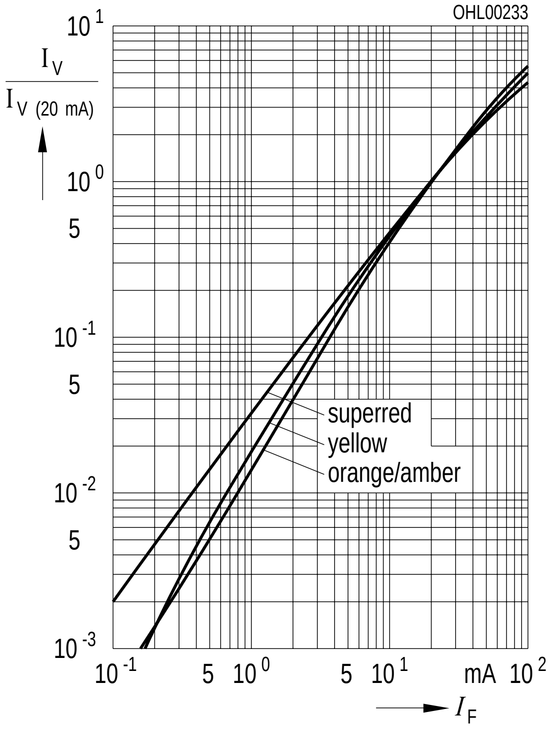
Durchlaßstrom $I_F = f(V_F)$
Forward current
T_A = 25˚C



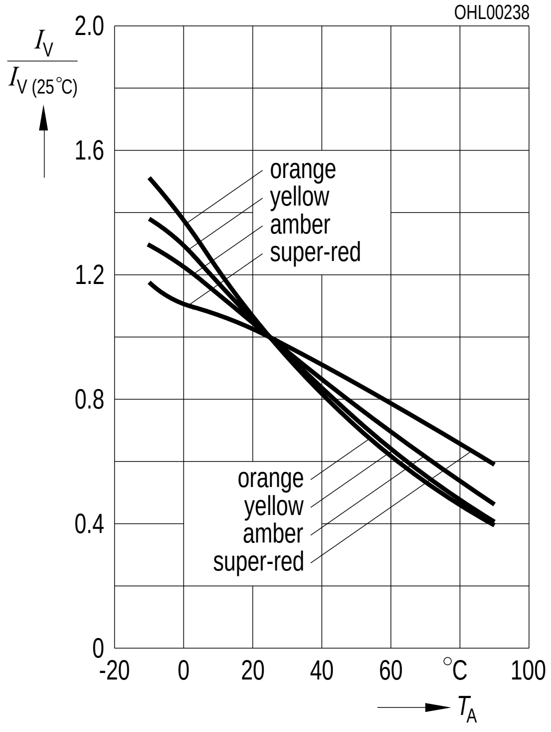
Maximal zulässiger Durchlaßstrom
Max. permissible forward current
$I_F = f(T_A)$



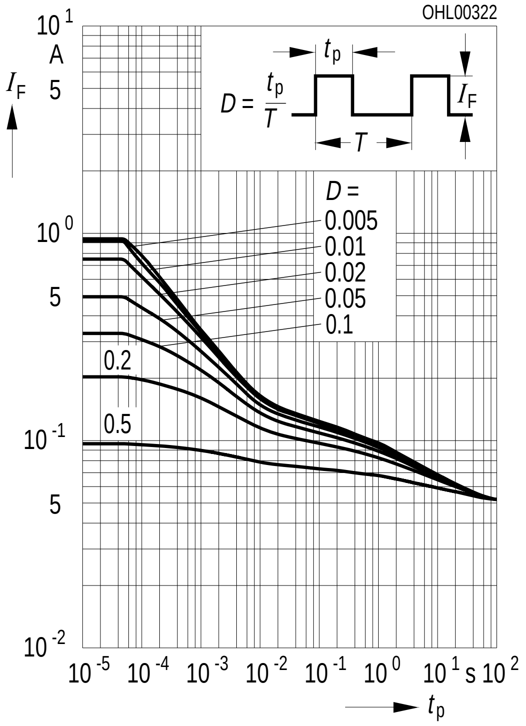
Relative Lichtstärke $I_V/I_{V(20\ mA)} = f(I_F)$
Relative luminous intensity
T_A = 25˚C



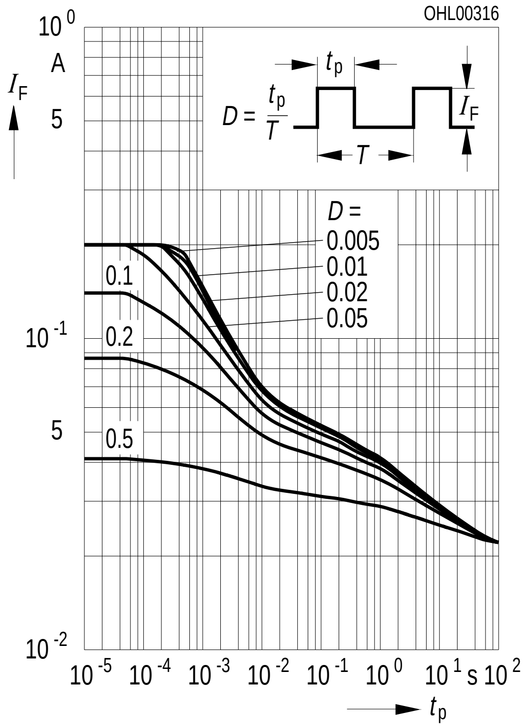
Relative Lichtstärke $I_V / I_{V(25^\circ C)} = f(T_A)$
Relative luminous intensity
I_F = 20 mA



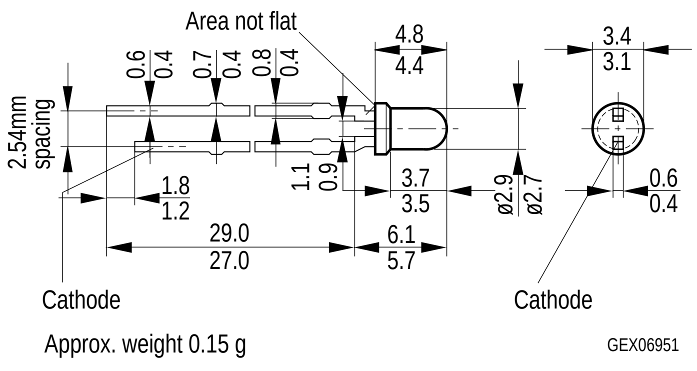
Zulässige Impulsbelastbarkeit $I_F = f(t_p)$
Permissible pulse handling capability
LS, LA, LO
Duty cycle D = parameter, T_A = 25 ˚C



Zulässige Impulsbelastbarkeit $I_F = f(t_p)$
Permissible pulse handling capability
LY
Duty cycle D = parameter, T_A = 25 ˚C



Maßzeichnung (Maße in mm, wenn nicht anders angegeben)
Package Outlines (Dimensions in mm, unless otherwise specified)



Kathodenkennzeichnung:	Kürzerer Lötspieß
Cathode mark:	Short solder lead